PALM INTRANET

Day : Wednesday

Date: 2/20/2008
Time: 10:18:48

Inventor Name Search

Enter the **first few letters** of the Inventor's Last Name.
Additionally, enter the **first few letters** of the Inventor's First name.

Last Name	**First Name**	
Gerson	Stanton	Search

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Refine Search

Search Results -

Term	Documents
HSC	4638
HSCS	884
HEMATOPOITIC	80
HEMATOPOITICS	2
PROGENITOR	22179
PROGENITORS	10274
STEM	511380
STEMS	124365
(14 AND ((HEMATOPOITIC ADJ (PROGENITOR OR STEM)) OR HSC)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	39
(L14 AND (HSC OR (HEMATOPOITIC ADJ (PROGENITOR OR STEM)))).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	39

Database:
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Search: L15

Refine Search

Recall Text Clear Interrupt

Search History

DATE: Wednesday, February 20, 2008 Purge Queries Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=AND		

L15	L14 and (HSC or (hematopoitic adj (progenitor or stem)))	39	L15
L14	L13 and (co-culture or co-culturing or co-cultured)	87	L14
L13	(Dexter or stromal) same ((Mesenchymal ad stem) or MSC)	360	L13
L12	L10 and ((Mesenchymal adj stem) or MSC)	23	L12
L11	L10 same (transduced or transformed)	9	L11
L10	L9 same (co-culture or co-culturing or co-cultured)	140	L10
L9	(HSC or (hematopoietic adj (progenitor or stem))) same (Dexter or stromal)	1810	L9
L8	L7 not L4	20	L8
L7	L3 same (co-culture or co-cultured or co-culturing)	28	L7
L6	L4 not L5	19	L6
L5	L4 and (co-culture or co-cultured or co-culturing)	9	L5
L4	L3 same (transduced or transformed)	28	L4
L3	(HSC or (hematopoietic adj (progenitor or stem))) same ((Mesenchymal adj stem) or MSC)	902	L3
L2	Gerson-Stanton-L$.in.	14	L2
L1	Gerson-Standton-L$.in.	0	L1

END OF SEARCH HISTORY

Welcome to DialogClassic Web(tm)

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 Dialog level 05.21.01D
Last logoff:  20feb08 12:00:03
Logon file1 20feb08 12:58:41
>>>PROFILE is in a suspended state.
>>>Contact Dialog Customer Services to re-activate it.
 * * *

File   1:ERIC 1965-2007/Nov
       (c) format only 2007 Dialog

      Set  Items  Description
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Cost is in DialUnits
?

B 155, 159, 5, 73
       20feb08 12:58:51 User259876 Session D1075.1
            $0.49    0.136 DialUnits File1
     $0.49  Estimated cost File1
     $0.03  INTERNET
     $0.52  Estimated cost this search
     $0.52  Estimated total session cost   0.136 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R) 1950-2008/Feb 14
        (c) format only 2008 Dialog
 *File 155: MEDLINE has reloaded. Please see HELP NEWS 155
for details.
  File 159:Cancerlit 1975-2002/Oct
        (c) format only 2002 Dialog
  File   5:Biosis Previews(R) 1926-2008/Feb W2
        (c) 2008 The Thomson Corporation
  File  73:EMBASE 1974-2008/Feb 19
        (c) 2008 Elsevier B.V.
 *File  73: The 2008 EMTREE Thesaurus has been loaded. Please see
HELP NEWS 72 for details.

      Set  Items  Description
      ---  -----  -----------
?

S (HSC OR (HEMATOPOIETIC (W) (STEM OR PROGENITOR))) (S) ((MESENCHYMAL (W) STEM) OR M
          11693  HSC
         209141  HEMATOPOIETIC
         559472  STEM
         110294  PROGENITOR
         120661  HEMATOPOIETIC(W)(STEM OR PROGENITOR)
          77716  MESENCHYMAL
         559472  STEM
          13483  MESENCHYMAL(W)STEM
           6060  MSC
      S1    834  (HSC OR (HEMATOPOIETIC (W) (STEM OR PROGENITOR))) (S)
               ((MESENCHYMAL (W) STEM) OR MSC)
?

S S1 (S) (TRANSDUCED OR TRANSFORMED OR TRANSFECTED)
            834  S1
          37993  TRANSDUCED
         237570  TRANSFORMED
```

```
          195454  TRANSFECTED
      S2       57  S1 (S) (TRANSDUCED OR TRANSFORMED OR TRANSFECTED)
?

S S2 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
              57  S2
             324  CO-CULTURE
              24  CO-CULTURED
              30  CO-CULTURING
      S3       0  S2 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
?


Set     Items   Description
S1        834   (HSC OR (HEMATOPOIETIC (W) (STEM OR PROGENITOR))) (S) ((ME-
            SENCHYMAL (W) STEM) OR MSC)
S2         57   S1 (S) (TRANSDUCED OR TRANSFORMED OR TRANSFECTED)
S3          0   S2 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
?

S S2 NOT PY>1998
              57  S2
        15395421  PY>1998
      S4       0  S2 NOT PY>1998
?


Set     Items   Description
S1        834   (HSC OR (HEMATOPOIETIC (W) (STEM OR PROGENITOR))) (S) ((ME-
            SENCHYMAL (W) STEM) OR MSC)
S2         57   S1 (S) (TRANSDUCED OR TRANSFORMED OR TRANSFECTED)
S3          0   S2 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S4          0   S2 NOT PY>1998
?

S S1 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
             834  S1
             324  CO-CULTURE
              24  CO-CULTURED
              30  CO-CULTURING
      S5       1  S1 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
?

T S5/3,K/ALL

  5/3,K/1     (Item 1 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
(c) 2008 The Thomson Corporation. All rts. reserv.

18910318   BIOSIS NO.: 200600255713
 Superior ex vivo cord blood expansion following co-culture with bone
 marrow-derived mesenchymal stem cells
AUTHOR: Robinson S N (Reprint); Ng J; Niu T; Yang H; McMannis J D;
  Karandish S; Kaur I; Fu P; Del Angel M; Messinger R; Flagge F; de Lima M;
  Decker W; Xing D; Champlin R; Shpall E J
AUTHOR ADDRESS: Univ Texas, MD Anderson Canc Ctr, Dept Blood and Marrow
  Transplantat, 1515 Holcombe Blvd,Unit 65, Houston, TX 77030 USA**USA
AUTHOR E-MAIL ADDRESS: snrobins@mdanderson.org
JOURNAL: Bone Marrow Transplantation  37 (4): p359-366 FEB 2006 2006
ISSN: 0268-3369
```

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DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

...ABSTRACT: ex vivo liquid culture and (2) co-culture of unmanipulated CB
  with bone-marrow-derived  mesenchymal  stem  cells (MSCs). Ex vivo
  culture was performed in medium supplemented with granulocyte
  colony-stimulating factor...

...colony-forming unit and cobblestone area-forming cell output. When
  compared to liquid culture, CB- MSC  co-culture (i) required less cell
  manipulation resulting in less initial HPC loss and (ii) markedly
  improved TNC and HPC output. CB- MSC  co-culture therefore holds promise
  for improving engraftment kinetics in CB transplant recipients.
DESCRIPTORS:
  ...METHODS & EQUIPMENT:  co-culture
?


Set     Items   Description
S1        834   (HSC OR (HEMATOPOIETIC (W) (STEM OR PROGENITOR))) (S) ((ME-
            SENCHYMAL (W) STEM) OR MSC)
S2         57   S1 (S) (TRANSDUCED OR TRANSFORMED OR TRANSFECTED)
S3          0   S2 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S4          0   S2 NOT PY>1998
S5          1   S1 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
?

S (HSC OR (HEMATOPOIETIC (W) (PROGENITOR OR STEM))) (S) (DEXTER OR STROMAL)
           11693  HSC
          209141  HEMATOPOIETIC
          110294  PROGENITOR
          559472  STEM
          120661  HEMATOPOIETIC(W)(PROGENITOR OR STEM)
            3499  DEXTER
          119706  STROMAL
      S6    3875  (HSC OR (HEMATOPOIETIC (W) (PROGENITOR OR STEM))) (S)
                  (DEXTER OR STROMAL)
?

S S6 (S) (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
            3875  S6
             324  CO-CULTURE
              24  CO-CULTURED
              30  CO-CULTURING
      S7       0  S6 (S) (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
?

S S6 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
            3875  S6
             324  CO-CULTURE
              24  CO-CULTURED
              30  CO-CULTURING
      S8       0  S6 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
?


Set     Items   Description
S1        834   (HSC OR (HEMATOPOIETIC (W) (STEM OR PROGENITOR))) (S) ((ME-
            SENCHYMAL (W) STEM) OR MSC)
```

```
S2          57   S1 (S) (TRANSDUCED OR TRANSFORMED OR TRANSFECTED)
S3           0   S2 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S4           0   S2 NOT PY>1998
S5           1   S1 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S6        3875   (HSC OR (HEMATOPOIETIC (W) (PROGENITOR OR STEM))) (S) (DEX-
                 TER OR STROMAL)
S7           0   S6 (S) (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S8           0   S6 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
?

S S6 (S) (TRANSDUCED OR TRANSDUCING OR TRANSFORMED OR TRANSFECTED OR TRANSFECTING)
            3875  S6
           37993  TRANSDUCED
           30944  TRANSDUCING
          237570  TRANSFORMED
          195454  TRANSFECTED
            7247  TRANSFECTING
      S9     333  S6 (S) (TRANSDUCED OR TRANSDUCING OR TRANSFORMED OR
                  TRANSFECTED OR TRANSFECTING)
?

S S9 NOT PY>1998
             333  S9
        15395421  PY>1998
     S10     145  S9 NOT PY>1998
?

RD
     S11      53  RD  (unique items)
?


Set     Items   Description
S1        834   (HSC OR (HEMATOPOIETIC (W) (STEM OR PROGENITOR))) (S) ((ME-
                 SENCHYMAL (W) STEM) OR MSC)
S2         57   S1 (S) (TRANSDUCED OR TRANSFORMED OR TRANSFECTED)
S3          0   S2 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S4          0   S2 NOT PY>1998
S5          1   S1 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S6       3875   (HSC OR (HEMATOPOIETIC (W) (PROGENITOR OR STEM))) (S) (DEX-
                 TER OR STROMAL)
S7          0   S6 (S) (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S8          0   S6 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S9        333   S6 (S) (TRANSDUCED OR TRANSDUCING OR TRANSFORMED OR TRANSF-
                 ECTED OR TRANSFECTING)
S10       145   S9 NOT PY>1998
S11        53   RD  (unique items)
?

S S11 AND (FEEDER)
              53  S11
           16014  FEEDER
     S12       1  S11 AND (FEEDER)
?

T S12/3,K/ALL

  12/3,K/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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11742248 PMID: 8653699

Engineered stromal layers and continuous flow culture enhance multidrug resistance gene transfer in hematopoietic progenitors.

Bertolini F; Battaglia M; Corsini C; Lazzari L; Soligo D; Zibera C; Thalmeier K

Division of Medical Oncology, IRCCS Maugeri Foundation, Pavia Medical Center, Italy.

Cancer research (UNITED STATES) Jun 1 1996, 56 (11) p2566-72, ISSN 0008-5472--Print Journal Code: 2984705R

Publishing Model Print

Document type: Journal Article; Research Support, Non-U.S. Gov't

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

... engineered stromal cell line L87/4 or stromal murine M2-10B4 cells were used as feeder after irradiation, and CD34+ cells from either cord blood or peripheral blood of mobilized cancer...

... layers and continuous flow culture conditions can significantly enhance retroviral-mediated gene transfer into human hematopoietic progenitor cells.

?

Set	Items	Description
S1	834	(HSC OR (HEMATOPOIETIC (W) (STEM OR PROGENITOR))) (S) ((MESENCHYMAL (W) STEM) OR MSC)
S2	57	S1 (S) (TRANSDUCED OR TRANSFORMED OR TRANSFECTED)
S3	0	S2 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S4	0	S2 NOT PY>1998
S5	1	S1 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S6	3875	(HSC OR (HEMATOPOIETIC (W) (PROGENITOR OR STEM))) (S) (DEXTER OR STROMAL)
S7	0	S6 (S) (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S8	0	S6 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S9	333	S6 (S) (TRANSDUCED OR TRANSDUCING OR TRANSFORMED OR TRANSFECTED OR TRANSFECTING)
S10	145	S9 NOT PY>1998
S11	53	RD (unique items)
S12	1	S11 AND (FEEDER)

?

S S11 AND (MSC OR (MESENCHYMAL (W) STEM) OR (BONE (W) MARROW (W) STEM))

	53	S11
	6060	MSC
	77716	MESENCHYMAL
	559472	STEM
	13483	MESENCHYMAL(W)STEM
	1531713	BONE
	591984	MARROW
	559472	STEM
	4799	BONE(W)MARROW(W)STEM
S13	0	S11 AND (MSC OR (MESENCHYMAL (W) STEM) OR (BONE (W) MARROW (W) STEM))

?

Set	Items	Description

```
S1          834   (HSC OR (HEMATOPOIETIC (W) (STEM OR PROGENITOR))) (S) ((ME-
                SENCHYMAL (W) STEM) OR MSC)
S2           57   S1 (S) (TRANSDUCED OR TRANSFORMED OR TRANSFECTED)
S3            0   S2 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S4            0   S2 NOT PY>1998
S5            1   S1 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S6         3875   (HSC OR (HEMATOPOIETIC (W) (PROGENITOR OR STEM))) (S) (DEX-
                TER OR STROMAL)
S7            0   S6 (S) (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S8            0   S6 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S9          333   S6 (S) (TRANSDUCED OR TRANSDUCING OR TRANSFORMED OR TRANSF-
                ECTED OR TRANSFECTING)
S10         145   S9 NOT PY>1998
S11          53   RD  (unique items)
S12           1   S11 AND (FEEDER)
S13           0   S11 AND (MSC OR (MESENCHYMAL (W) STEM) OR (BONE (W) MARROW
                (W) STEM))
?

S S11 AND (HUMAN)
               53  S11
         17171871  HUMAN
      S14      38  S11 AND (HUMAN)
?

T S14/3,K/ALL
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14/3,K/1 (Item 1 from file: 155)

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DIALOG(R)File 155:MEDLINE(R)
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12915662   PMID: 9853529
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Retroviral transfer of the glucocerebrosidase gene into CD34+ cells from patients with Gaucher disease: in vivo detection of transduced cells without myeloablation.

Dunbar C E; Kohn D B; Schiffmann R; Barton N W; Nolta J A; Esplin J A; Pensiero M; Long Z; Lockey C; Emmons R V; Csik S; Leitman S; Krebs C B; Carter C; Brady R O; Karlsson S

Hematology Branch, National Heart, Lung and Blood Institute, National Institutes of Health, Bethesda, MD, USA.

Human gene therapy (UNITED STATES) Nov 20 1998, 9 (17) p2629-40, ISSN 1043-0342--Print Journal Code: 9008950

Contract/Grant No.: MO1 RR-43; RR; United States NCRR

Publishing Model Print

Document type: Clinical Trial; Journal Article; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, P.H.S.

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

...cells with the G1Gc vector. This vector uses the viral LTR promoter to express the human glucocerebrosidase cDNA. Three adult patients have been entered with follow-up of 6-15 months...

... mobilized and CD34-enriched PB cells or CD34-enriched steady state BM cells, and were transduced ex vivo for 72 hr. Patient 1 had PB cells transduced in the presence of autologous stromal marrow cells. Patient 2 had PB cells transduced in the presence of autologous stroma, IL-3, IL-6, and SCF. Patient 3 had BM cells transduced in the presence of autologous stroma, IL-3, IL-6, and SCF. At the end...

... clinical benefit, and glucocerebrosidase enzyme activity did not increase in any patient following infusion of transduced cells. Modifications of vector systems and transduction conditions, along with partial myeloablation to allow higher...

14/3,K/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

12822053 PMID: 9751769
HIV, but not murine leukemia virus, vectors mediate high efficiency gene transfer into freshly isolated G0/G1 human hematopoietic stem cells.
Uchida N; Sutton R E; Friera A M; He D; Reitsma M J; Chang W C; Veres G; Scollay R; Weissman I L
SyStemix, Inc., A Norvartis Company, Palo Alto, CA 94304, USA. nuchida@stemcell.net
Proceedings of the National Academy of Sciences of the United States of America (UNITED STATES) Sep 29 1998, 95 (20) p11939-44, ISSN 0027-8424--Print Journal Code: 7505876
Contract/Grant No.: K08 CA71671; CA; United States NCI
Publishing Model Print
Document type: Comparative Study; In Vitro; Journal Article; Research Support, U.S. Gov't, P.H.S.
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... not murine leukemia virus, vectors mediate high efficiency gene transfer into freshly isolated G0/G1 human hematopoietic stem cells.
Recent studies have opened the possibility that quiescent, G0/G1 hematopoietic stem cells (HSC) can be gene transduced ; lentiviruses (such as HIV type 1, HIV) encode proteins that permit transport of the viral...

... demonstrated efficient transduction by using an HIV-1-based vector gene delivery system into various human cell types including human CD34(+) cells or terminally differentiated neurons. Here we compare the transduction efficiency of two vectors, HIV-based and murine leukemia virus (MuLV)-based vectors, on untreated and highly purified human HSC subsets that are virtually all in G0/G1. The HIV vector, but not MuLV vector supernatants, transduced freshly isolated G0/G1 HSC from mobilized peripheral blood. Single-step transduction using replication-defective HIV resulted in HSC that expressed the green fluorescent protein (GFP) transgene while retaining their stem cell phenotype; clonal outgrowths of these GFP+ HSC on bone marrow stromal cells fully retained GFP expression for at least 5 weeks. MuLV-based vectors did not transduce resting HSC , as measured by transgene expression, but did so readily when the HSC were actively cycling after culture in vitro for 3 days in a cytokine cocktail. These results suggest that resting HSC may be transduced by lentiviral-based, but not MuLV, vectors and maintain their primitive phenotype, pluripotentiality, and at ...

14/3,K/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

12792260 PMID: 9723709
Characterization of TEK receptor tyrosine kinase and its ligands, Angiopoietins, in human hematopoietic progenitor cells.
Sato A; Iwama A; Takakura N; Nishio H; Yancopoulos G D; Suda T
Department of Cell Differentiation, Institute of Molecular Embryology and Genetics, Kumamoto University School of Medicine, Honjo, Japan.
International immunology (ENGLAND) Aug 1998, 10 (8) p1217-27, ISSN 0953-8178--Print Journal Code: 8916182
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Characterization of TEK receptor tyrosine kinase and its ligands, Angiopoietins, in human hematopoietic progenitor cells.
... vascular maturation, maintenance of integrity and remodeling. We generated mAb against the extracellular domain of human TEK protein to elucidate its expression pattern in human hematopoietic cells. Flow cytometric analysis of bone marrow cells revealed that TEK was expressed in ...
... CD38- cells, indicating that TEK is expressed in a subset of primitive hematopoietic stem cells (HSC). TEK was also expressed in 20% of CD19+ B lymphocytes but not in other lineage...

... of the TEK-TEK ligand signaling pathway. Although neither ligands affected the proliferation of TEK- transfected hematopoietic cells or the colony formation of CD34+TEK+ bone marrow cells, both promoted the adhesion of TEK- transfected hematopoietic cells to a collagen matrix or a layer of bone marrow stromal cells. These findings indicate that the TEK-TEK ligand signaling pathway is regulated in a...
Chemical Name: ANGPT1 protein, human ; Angiopoietin-1; Angiopoietin-2; Antigens, CD; Antigens, CD34; Cytokines; Ligands; Membrane Glycoproteins; Proteins; RNA, Messenger...

14/3,K/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

12713573 PMID: 9639503
Sustained gene expression in retrovirally transduced, engrafting human hematopoietic stem cells and their lympho-myeloid progeny.
Cheng L; Du C; Lavau C; Chen S; Tong J; Chen B P; Scollay R; Hawley R G; Hill B
SyStemix, Inc, Palo Alto, CA, USA. LCheng@Osiristx.com
Blood (UNITED STATES) Jul 1 1998, 92 (1) p83-92, ISSN 0006-4971--Print Journal Code: 7603509
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Sustained gene expression in retrovirally transduced, engrafting human hematopoietic stem cells and their lympho-myeloid progeny.
Inefficient retroviral-mediated gene transfer to human hematopoietic stem cells (HSC) and insufficient gene expression in progeny cells derived from transduced HSC are two major problems associated with HSC -based gene therapy. In this study we evaluated the ability of a murine

stem cell virus (MSCV)-based retroviral vector carrying the low-affinity human nerve growth factor receptor (NGFR) gene as reporter to maintain gene expression in transduced human hematopoietic cells. CD34(+) cells lacking lineage differentiation markers (CD34(+)Lin-) isolated from human bone marrow and mobilized peripheral blood were transduced using an optimized clinically applicable protocol. Under the conditions used, greater than 75% of the...

... NGFR+ cells sorted 2 days posttransduction were assayed in vitro in clonogenic and long-term stromal cultures, sustained reporter expression was observed in differentiated erythroid and myeloid cells derived from transduced progenitors, and in differentiated B-lineage cells after 6 weeks. Moreover, when these transduced CD34(+)Lin-NGFR+ cells were used to repopulate human bone grafts implanted in severe combined immunodeficient mice, MSCV-directed NGFR expression could be detected on 37% +/- 6% (n = 5) of the donor-type human cells recovered 9 weeks postinjection. These findings suggest potential utility of the MSCV retroviral vector in the development of effective therapies involving gene-modified HSC .

14/3,K/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

12711500 PMID: 9639425
Stroma-conditioned medium and sufficient prestimulation improve fibronectin fragment-mediated retroviral gene transfer into human primitive mobilized peripheral blood stem cells through effects on their recovery and transduction efficiency.
Breems D A; Van Driel E M; Hawley R G; Siebel K E; Ploemacher R E
Institute of Hematology, Erasmus University Rotterdam, The Netherlands.
Leukemia - official journal of the Leukemia Society of America, Leukemia Research Fund, U.K (ENGLAND) Jun 1998, 12 (6) p951-9, ISSN 0887-6924 --Print Journal Code: 8704895
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Stroma-conditioned medium and sufficient prestimulation improve fibronectin fragment-mediated retroviral gene transfer into human primitive mobilized peripheral blood stem cells through effects on their recovery and transduction efficiency.
... due to previous cytotoxic chemotherapy treatment of the patient. In addition, primitive hematopoietic stem cells (HSC) from mobilized peripheral blood are almost exclusively quiescent, which makes it hard to induce proliferation...

... parameters that may contribute to an improvement of the poor transduction efficiency of the primitive HSC , including prestimulation time, the use of the carboxy-terminal fibronectin fragment CH-296, as well as stromal cell line conditioned media. Retroviral supernatant transduction in combination with CH-296 increased significantly the...

...compared to supernatant alone and made the use of polycations redundant. Gene transfer of primitive HSC (cobblestone area forming cell (CAFC) week 6) was specifically improved when this procedure was preceded...

... CAFC quality or transduction efficiency, but increased greatly the recovery of the total number of transduced and untransduced HSC leading to larger grafts containing higher numbers of transduced stem cells.

14/3,K/6 (Item 6 from file: 155)

12578172 PMID: 9472782

High-level gene transfer to cord blood progenitors using gibbon ape leukemia virus pseudotype retroviral vectors and an improved clinically applicable protocol.

Movassagh M; Desmyter C; Baillou C; Chapel-Fernandes S; Guigon M; Klatzmann D; Lemoine F M
Biologie et Therapie des Pathologies Immunitaires, ERS CNRS 107 C.E.R.V.I., CHU Pitie Salpetriere, Paris, France.

Human gene therapy (UNITED STATES) Jan 20 1998, 9 (2) p225-34, ISSN 1043-0342--Print Journal Code: 9008950
Publishing Model Print
Document type: Comparative Study; Journal Article; Research Support, Non-U.S. Gov't
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

The best methods for transducing hematopoietic progenitor cells usually involve either direct co-cultivation with virus-producing cells or human stromal supportive cells. However, these methods cannot be safely or easily applied to clinical use. Therefore...
...envelope protein. Under these conditions, between 50 and 100% of CFC and LTC-IC were transduced . Thus, we have developed a protocol capable of highly transducing cord blood progenitors under conditions suitable for a therapeutical use.

14/3,K/7 (Item 7 from file: 155)

12446842 PMID: 9389699

Intracellular immunization of rhesus CD34+ hematopoietic progenitor cells with a hairpin ribozyme protects T cells and macrophages from simian immunodeficiency virus infection.

Rosenzweig M; Marks D F; Hempel D; Heusch M; Kraus G; Wong-Staal F; Johnson R P
New England Regional Primate Research Center, Harvard Medical School, Southborough, MA 01772, USA.

Blood (UNITED STATES) Dec 15 1997, 90 (12) p4822-31, ISSN 0006-4971 --Print Journal Code: 7603509
Contract/Grant No.: AI-36550; AI; United States NIAID; DK49618; DK; United States NIDDK; RR-00168; RR; United States NCRR
Publishing Model Print
Document type: Journal Article; Research Support, U.S. Gov't, P.H.S.
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... in vitro T-cell differentiation of genetically modified hematopoietic progenitor cells. Using a novel thymic stromal culture technique, we

evaluated the ability of a hairpin ribozyme specific for simian immunodeficiency virus (SIV) and human immunodeficiency virus type 2 (HIV-2) to inhibit viral replication in T lymphocytes derived from transduced CD34+ progenitor cells. Retroviral transduction of rhesus macaque CD34+ progenitor cells with a retroviral vector...

... efficiencies ranging between 21% and 56%. After transduction, CD34+ cells were cultured on rhesus thymic stromal culture (to support in vitro differentiation of T cells) or in the presence of cytokines...

... macrophage-like cells). After expansion and selection with the neomycin analog G418, cells derived from transduced progenitor cells were challenged with SIV. CD4+ T cells derived from CD34+ hematopoietic cells transduced with the ribozyme vector p9456t were highly resistant to challenge with SIV, exhibiting up to...

... decrease in SIV replication, even after high multiplicities of infection. Macrophages derived from CD34+ cells transduced with the 9456 ribozyme exhibited a comparable level of inhibition of SIV replication. These results show that a hairpin ribozyme introduced into CD34+ hematopoietic progenitor cells can retain the ability to inhibit AIDS virus replication after T-cell differentiation and support the feasibility of intracellular immunization of hematopoietic stem cells against infection with HIV and SIV. Protection of multiple hematopoietic lineages with the SIV...

14/3,K/8 (Item 8 from file: 155)

12132982 PMID: 9020937

Gene therapy for haematopoietic and lymphoid disorders.

Kohn D B
Division of Research Immunology/Bone Marrow Transplantation, Children's Hospital of Los Angeles, CA 90027, USA.

Clinical and experimental immunology (ENGLAND) Jan 1997, 107 Suppl 1 p54-7, ISSN 0009-9104--Print Journal Code: 0057202
Publishing Model Print
Document type: Journal Article; Review
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Gene transfer into haematopoietic stem cells (HSC) has been investigated for treatment of genetic disorders, conferral of chemotherapy resistance and insertion of...

... inhibit HIV-1 replication. Methods have been available for almost a decade to transduce murine HSC using high-titre retroviral vectors and stimulation of HSC proliferation with cytokines such as IL-3 and IL-6. Unfortunately, attempts to replicate the...
... transplantation models have consistently shown that only a small fraction (0.1-1%) of reconstituting HSC are transduced using protocols similar to those which are successful in murine models. Initial clinical trials using retroviral-mediated gene transfer into human HSC also produced minimal transduction frequencies. The dicotomous results may reflect differences in the cell cycle kinetics of murine HSC versus those of larger mammals or the density of receptors for the retroviral vectors on the cells. Attempts to increase the fraction of HSC which are in active

cell cycle, a prerequisite for retroviral-mediated transduction, have used either combinations of recombinant cytokines, culture on marrow stromal layers, or alternative sources for HSC , such as mobilized peripheral blood stem cells or umbilical cord blood. Other efforts have used...

... date, none of these methods has produced a significantly increased frequency of long-term reconstituting HSC . Results using adeno-associated virus (AAV)-based vectors for HSC transduction have been conflicting, with the stable persistence of non-integrated virus particles making interpretation...

...best be directed toward disorders that may benefit from a small fraction of genetically corrected HSC . These would include disorders where progeny of corrected HSC would be expected to have a selective survival advantage (e.g. SCID, WAS, HIV, chemoresistance...

... cells can have a direct clinical benefit (e.g. CGD, MPS). Further basic research into HSC biology and gene delivery vectors must continue for wider application, such as haemoglobinopathies and some...

14/3,K/9 (Item 9 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

12110252 PMID: 8978284

A novel herpes vector for the high-efficiency transduction of normal and malignant human hematopoietic cells.

Dilloo D; Rill D; Entwistle C; Boursnell M; Zhong W; Holden W; Holladay M ; Inglis S; Brenner M

Cell and Gene Therapy Program, St Jude Children's Research Hospital, Memphis, TN 38105, USA.

Blood (UNITED STATES) Jan 1 1997, 89 (1) p119-27, ISSN 0006-4971--Print Journal Code: 7603509

Contract/Grant No.: CA 20180; CA; United States NCI; CA 21765; CA; United States NCI

Publishing Model Print

Document type: Journal Article; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, P.H.S.

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

A novel herpes vector for the high-efficiency transduction of normal and malignant human hematopoietic cells.

... advantages as vectors for gene transfer, but as yet they have not proved capable of transducing hematopoietic cells. Using a genetically inactivated form of HSV that is restricted to a single cycle of replication (disabled single-cycle virus, [DISC-HSV]), we have transduced normal human hematopoietic progenitor cells and primary leukemia blasts with efficiencies ranging from 80% to 100%, in the absence of growth factors or stromal support. Toxicity was low, with 70% to 100% of cells surviving the transduction process. Peak...

... is the transfer of immunostimulatory genes, to generate leukemia immunogens. Thus, murine A20 leukemia cells transduced with a DISC-HSV vector encoding granulocyte-macrophage colony-stimulating factor were able to stimulate a potent antitumor response in mice, even against pre-existing leukemia. The exceptional transducing ability of the DISC-HSV vector should therefore facilitate genetic manipulation of normal and malignant

human hematopoietic cells for biological and clinical investigation.

14/3,K/10 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11963951 PMID: 8892040
In vitro T lymphopoiesis: a model system for stem cell gene therapy for AIDS.
Rosenzweig M; Marks D F; Hempel D; Johnson R P
Division of Immunology, New England Regional Primate Research Center, Harvard Medical School, Southborough, MA 01772, USA.
Journal of medical primatology (DENMARK) Jun 1996, 25 (3) p192-200, ISSN 0047-2565--Print Journal Code: 0320626
Contract/Grant No.: AI-36550; AI; United States NIAID; RR-00055; RR; United States NCRR; RR-00168; RR; United States NCRR
Publishing Model Print
Document type: Journal Article; Research Support, U.S. Gov't, P.H.S.
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... safety and efficacy of this approach remain unanswered and may be addressed in a non- human primate model. To facilitate evaluation of expression of foreign genes in T cells derived from transduced hematopoietic progenitor cells, we have established a culture system that supports the differentiation of rhesus macaque and human CD34+ bone marrow derived cells into mature T cells. Thymic stromal monolayers were prepared from the adherent cell fraction of collagenase digested fetal or neonatal thymus. After 10-14 days, purified rhesus CD34+ bone marrow-derived cells cultured on thymic stromal monolayers yielded CD3+CD4+CD8+, CD3+CD4+CD8-, and CD3+CD4-CD8+ cells. Following stimulation ...

... culture for up to 20 weeks. We next evaluated the ability of rhesus CD34+ cells transduced with a retroviral vector containing the marker gene neo to undergo in vitro T cell differentiation. CD34+ cells transduced in the presence of bone marrow stroma and then cultured on rhesus thymic stroma resulted...

... retroviral marker gene. These studies should facilitate both in vitro and in vivo studies of hematopoietic stem cell therapeutic strategies for AIDS.

14/3,K/11 (Item 11 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11945577 PMID: 8874184
Dual action of retinoic acid on human embryonic/fetal hematopoiesis: blockade of primitive progenitor proliferation and shift from multipotent/erythroid/monocytic to granulocytic differentiation program.
Tocci A; Parolini I; Gabbianelli M; Testa U; Luchetti L; Samoggia P; Masella B; Russo G; Valtieri M; Peschle C
Department of Hematology and Oncology, Istituto Superiore di Sanita, Rome, Italy.
Blood (UNITED STATES) Oct 15 1996, 88 (8) p2878-88, ISSN 0006-4971 --Print Journal Code: 7603509

Publishing Model Print
Document type: Comparative Study; Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Dual action of retinoic acid on human embryonic/fetal hematopoiesis: blockade of primitive progenitor proliferation and shift from multipotent/erythroid/monocytic to...

... proliferative potential colony-forming cells [HPP-CFCs]) and putative hematopoietic stem cells (HSCs; assayed in Dexter -type long-term culture). High concentrations of either compound (1) drastically reduced the number of primary HPP-CFC colonies and totally abolished their recloning capacity and (2) inhibited HSC proliferation. It is crucial that these results mirror recent observations indicating that murine adult HPCs transduced with dominant negative ATRA receptor (RAR) gene are immortalized and show a selective blockade of...

... a dual effect hypothetically mediated by interaction with the RAR/RXR heterodimer, ie, inhibition of HSC / primitive HPC proliferation and induction of CFU-GEMM/ BFU-E/CFU-M shift from the...

14/3,K/12 (Item 12 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

11925847 PMID: 8854097

Sustained retroviral gene marking and expression in lymphoid and myeloid cells derived from transduced hematopoietic progenitor cells.

Plavec I; Voytovich A; Moss K; Webster D; Hanley M B; Escaich S; Ho K E; Bohnlein E; DiGiusto D L

SyStemix, Palo Alto, CA 94304, USA.

Gene therapy (ENGLAND) Aug 1996, 3 (8) p717-24, ISSN 0969-7128--Print Journal Code: 9421525

Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

The expression of antiviral genes in human hematopoietic stem or progenitor cells has been proposed as a strategy for gene therapy of...

... for a transdominant inhibitor of HIV replication (RevM10) into CD34+ stem/progenitor cells isolated from human umbilical cord blood (UCB). Following transduction, cells were allowed to differentiate either in vitro in clonogenic assays and long-term stromal cell cultures or in human thymus implanted in immunodeficient scid/scid mice in vivo (SCID-hu). Following differentiation and expansion...

...10-30% in most cases) were detected in methylcellulose colony assays and in long-term stromal cell cultures (1-5%). In contrast, gene-marked T cells derived from transduced CD34+ cells in a SCID-hu model were detected at an even lower frequency (0...

... findings demonstrate that LTR-driven gene expression is sustained in relevant cells derived from retrovirus- transduced hematopoietic progenitor cells after extensive differentiation in vitro and in vivo and suggest that stringent in vivo...

14/3,K/13 (Item 13 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11742248 PMID: 8653699
Engineered stromal layers and continuous flow culture enhance multidrug resistance gene transfer in hematopoietic progenitors.
Bertolini F; Battaglia M; Corsini C; Lazzari L; Soligo D; Zibera C; Thalmeier K
Division of Medical Oncology, IRCCS Maugeri Foundation, Pavia Medical Center, Italy.
Cancer research (UNITED STATES) Jun 1 1996, 56 (11) p2566-72, ISSN 0008-5472--Print Journal Code: 2984705R
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... term culture-clonogenic cells (LTC-CC)] could be transduced by supernatant exposure or coculture of human CD34+ progenitors with MDR retroviral producer line A12M1. We reasoned that a stromal cell layer...

... thus becoming a more accessible target for gene delivery. In static culture studies in flasks, human engineered stromal cell line L87/4 or stromal murine M2-10B4 cells were used as...

... cell layers and continuous flow culture conditions can significantly enhance retroviral-mediated gene transfer into human hematopoietic progenitor cells.

14/3,K/14 (Item 14 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11741518 PMID: 8639773
Interferon-gamma constitutively expressed in the stromal microenvironment of human marrow cultures mediates potent hematopoietic inhibition.
Selleri C; Maciejewski J P; Sato T; Young N S
Hematology Branch, National Heart, Lung, and Blood Institute, Bethesda, MD 20892-2116, USA.
Blood (UNITED STATES) May 15 1996, 87 (10) p4149-57, ISSN 0006-4971 --Print Journal Code: 7603509
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Interferon-gamma constitutively expressed in the stromal microenvironment of human marrow cultures mediates potent hematopoietic inhibition.
... long-term culture-initiating cell (LTC-IC) assay, the best in vitro surrogate test for human hematopoietic stem cells, as well as of the output of committed progenitor cells (colony-forming...

...a measure of LTC-IC number and clonogenicity. To mimick local production of IFN-gamma, human stromal cells were engineered by

retroviral-mediated gene transfer to express a transduced IFN-gamma gene. IFN-gamma secreted by stromal cells was far more potent than exogenous IFN-gamma in its effects in the LTC...

... CD34+ cells. There was no apparent effect of local low-level IFN-gamma production on stromal cell function, as reflected in cell morphology, cell surface phenotype, or expression of hematopoietic growth factor genes. LTBMC with genetically altered stromal cells offers an in vitro model of immune suppression of hematopoiesis in AA and may...

14/3,K/15 (Item 15 from file: 155)

11589072 PMID: 8593601

The presence of an autologous marrow stromal cell layer increases glucocerebrosidase gene transduction of long-term culture initiating cells (LTCICs) from the bone marrow of a patient with Gaucher disease.

Wells S; Malik P; Pensiero M; Kohn D B; Nolta J A
Division of Research Immunology/Bone Marrow Transplantation, Childrens Hospital Los Angeles, CA 90027, USA.

Gene therapy (ENGLAND) Oct 1995, 2 (8) p512-20, ISSN 0969-7128--Print Journal Code: 9421525
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

...the marrow of a Gaucher patient using G1GC, a simple retroviral vector containing a normal human GC cDNA. The ability of autologous stromal support and recombinant cytokines to increase the extent of transduction of colony-forming-cells (CFCs) and long-term culture initiating cells (LTCICs) was assessed. The presence of a stromal layer significantly increased the extent of GC gene transfer into 14-day CFCs, as determined...
... reaction (PCR) of individual colonies (18.8% with stroma versus 5% without, P < 0.001). Stromal support also increased the extent of transduction of LTCICs (10% with stroma versus 0.83...

...0.001). Non-adherent cells from long-term bone marrow cultures initiated with CD34+ progenitors transduced on autologous stroma had higher levels of GC enzyme activity than cultures initiated with cells transduced without stroma. The percentage of cells which were GC positive by immunohistochemistry was also increased...

...into CFCs but not LTCICs. These studies indicate that the GC gene can be effectively transduced into LTCICs by retroviral vectors in the presence of stroma at levels significant for clinical...

14/3,K/16 (Item 16 from file: 155)

11244455 PMID: 7749119

Stable integration of retrovirally transduced genes into human umbilical cord blood high-proliferative potential colony-forming cells (HPP-CFC) as assessed after multiple HPP-CFC colony replatings in vitro.

Lu L; Xiao M; Clapp D W; Li Z H; Broxmeyer H E

Department of Medicine (Hematology/Oncology), University School of Medicine, Indianapolis, Indiana 46202-5121, USA.
Blood cells (UNITED STATES) 1994, 20 (2-3) p525-30, ISSN 0340-4684 --Print Journal Code: 7513567
Contract/Grant No.: R01 HL46549; HL; United States NHLBI; R01 HL49202; HL ; United States NHLBI; R37 CA36464; CA; United States NCI
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, P.H.S.
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Stable integration of retrovirally transduced genes into human umbilical cord blood high-proliferative potential colony-forming cells (HPP-CFC) as assessed after multiple...

We previously demonstrated stable integration of a transduced thymidine kinase (TK)-neo gene into immature and replatable stem and progenitor cells, as assessed...

... in third- and fourth-generation colonies, nonadherent low-density T-lymphocyte-depleted (NALT-) cells from human umbilical cord blood were prestimulated with recombinant human (rhu) erythropoietin (Epo), steel factor (SLF), interleukin-3 (IL-3), granulocyte-macrophage (GM) colony-stimulating...

... confirmed that the TK-neo gene could be efficiently introduced into hematopoietic progenitor cells without stromal cells as a source of virus. As previously reported, proviral integration was detected in primary ...

... and fourth-generation replated HPP-CFC, suggesting a high degree of stable integration of the transduced gene.

14/3,K/17 (Item 17 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11012551 PMID: 8044788

Efficient transfer of selectable and membrane reporter genes in hematopoietic progenitor and stem cells purified from human peripheral blood.

Valtieri M; Schiro R; Chelucci C; Masella B; Testa U; Casella I; Montesoro E; Mariani G; Hassan H J; Peschle C
Thomas Jefferson Cancer Institute, Thomas Jefferson University, Philadelphia, Pennsylvania 19107.
Cancer research (UNITED STATES) Aug 15 1994, 54 (16) p4398-404, ISSN 0008-5472--Print Journal Code: 2984705R
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... transfer of selectable and membrane reporter genes in hematopoietic progenitor and stem cells purified from human peripheral blood.

... receptor complementary DNA; and (b) effective gene transduction of putative HSCs, i.e., cells initiating Dexter -type long-term culture (LTC-ICs). Purified HPCs induced into cycling by growth factors

(interleukin 3, interleukin 6, c-kit ligand) were transduced with the N2 retroviral vector containing the neomycin resistance (neor) gene. More than 80% of transduced HPCs were resistant to the toxic G418 level. Thereafter, the HPCs were effectively transduced with the LNSN retroviral vector containing a nerve growth factor receptor complementary DNA; the nerve growth factor receptor was detected on > or = 18% of the transduced HPCs. These experiments provide a new tool from which (a) to monitor expression of a transduced membrane report on hematopoietic cells, particularly at the level of HPCs/HSCs, and (b) to characterize the transduced cells by double- and triple-labeling membrane antigen analysis. Purified HPCs/HSCs grown in Dexter -type LTC were transduced at 1 week by exposure to supernatant N2 retroviral particles in the absence of exogenous...

... These experiments represent a first step toward development of preclinical models for gene transfer into human peripheral blood HSCs by complex retroviral vectors.

14/3,K/18 (Item 18 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10937401 PMID: 7514050
Sustained human hematopoiesis in immunodeficient mice by cotransplantation of marrow stroma expressing human interleukin-3: analysis of gene transduction of long-lived progenitors.
Nolta J A; Hanley M B; Kohn D B
Division of Research Immunology/Bone Marrow Transplantation, Childrens Hospital Los Angeles, CA 90027.
Blood (UNITED STATES) May 15 1994, 83 (10) p3041-51, ISSN 0006-4971 --Print Journal Code: 7603509
Contract/Grant No.: DK42694; DK; United States NIDDK
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, P.H.S.
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Sustained human hematopoiesis in immunodeficient mice by cotransplantation of marrow stroma expressing human interleukin-3: analysis of gene transduction of long-lived progenitors.
We have developed a novel cotransplantation system in which gene-transduced human CD34+ progenitor cells are transplanted into immunodeficient (bnx) mice together with primary human bone marrow (BM) stromal cells engineered to produce human interleukin-3 (IL-3). The IL-3-secreting stroma produced sustained circulating levels of human IL-3 for at least 4 months in the mice. The IL-3-secreting stroma, but not control stroma, supported human hematopoiesis from the cotransplanted human BM CD34+ progenitors for up to 9 months, such that an average of 6% of the hematopoietic cells removed from the mice were of human origin (human CD45+). Human multilineage progenitors were readily detected as colony-forming units from the mouse marrow over this time period. Retroviral-mediated transfer of the neomycin phosphotransferase gene or a human glucocerebrosidase cDNA into the human CD34+ progenitor cells was performed in vitro before cotransplantation. Human multilineage progenitors were recovered from the marrow of the mice 4 to 9 months later and were shown to contain the transduced genes. Mature human blood cells marked by vector DNA circulated in the murine peripheral blood throughout

this time period. This xenograft system will be useful in the study of gene transduction of human hematopoietic stem cells, by tracing the development of individually marked BM stem cells into mature blood cells...

14/3,K/19 (Item 19 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10743936 PMID: 7504056
High efficiency retroviral mediated gene transduction into single isolated immature and replatable CD34(3+) hematopoietic stem/progenitor cells from human umbilical cord blood.
Lu L; Xiao M; Clapp D W; Li Z H; Broxmeyer H E
Department of Medicine, Hematology/Oncology, Indiana University School of Medicine, Indianapolis 46202-5121.
Journal of experimental medicine (UNITED STATES) Dec 1 1993, 178 (6) p2089-96, ISSN 0022-1007--Print Journal Code: 2985109R
Contract/Grant No.: R01 HL-46549; HL; United States NHLBI; R01 HL-49202; HL; United States NHLBI; R37 CA 36464; CA; United States NCI
Publishing Model Print
Document type: In Vitro; Journal Article; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, P.H.S.
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... gene transduction into single isolated immature and replatable CD34(3+) hematopoietic stem/progenitor cells from human umbilical cord blood.
... therapy to correct genetic disorders, we evaluated if a TK-neo gene could be directly transduced in a stable manner into single isolated subsets of purified immature hematopoietic cells that demonstrate...

... steel factor (SLF), interleukin (IL)-3, and granulocyte-macrophage colony stimulating factor (GM-CSF) and transduced with the gene in two ways. CD34(3+) cells were incubated with retroviral-containing supernatant ...

... efficiency into low numbers of or isolated single purified CD34(3+) immature hematopoietic cells without stromal cells as a source of virus or accessory cells. Proviral integration was detected in primary...

... and -high proliferative potential colony forming cells (HPP-CFC). This demonstrates stable expression of the transduced gene into single purified stem/progenitor cells with replating capacity, results that should be applicable...

14/3,K/20 (Item 20 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10532522 PMID: 8097051
Gene transfer therapy for heritable disease: cell and expression targeting.
Mitani K; Clemens P R; Moseley A B; Caskey C T
Howard Hughes Medical Institute, Baylor College of Medicine, Houston, Texas 77030.
Philosophical transactions of the Royal Society of London. Series B,

Biological sciences (ENGLAND) Feb 27 1993, 339 (1288) p217-24, ISSN 0962-8436--Print Journal Code: 7503623
Contract/Grant No.: R01 DK42696; DK; United States NIDDK
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, P.H.S.; Review
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... self-renewal. We present evidence for the highly efficient gene transfer and sustained expression of human ADA in human primitive hematopoietic progenitors using retroviral supernatant with a supportive stromal layer. A stem cell-enriched (CD34+) fraction was also successfully transduced . Duchenne muscular dystrophy (DMD) is also a good model for somatic gene therapy. Two of...

14/3,K/21 (Item 21 from file: 155)

10144398 PMID: 1533594
Humoral and cell surface interactions during gamma-irradiation leukemogenesis in vitro.
Greenberger J; Leif J; Crawford D; Anklesaria P; English D; Sakakeeny M; Rubin J; Pierce J; Shadduck R; FitzGerald T J
Department of Radiation Oncology, University of Massachusetts Medical Center, Worcester 01655.
Experimental hematology (UNITED STATES) Jan 1992, 20 (1) p92-102, ISSN 0301-472X--Print Journal Code: 0402313
Contract/Grant No.: CA15237; CA; United States NCI; CA39851; CA; United States NCI; DE08798; DE; United States NIDCR
Publishing Model Print
Document type: Journal Article; Research Support, U.S. Gov't, P.H.S.
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... of conditioned medium from irradiated D2XRII cells yielded a 75,000-dalton glycoprotein termed leukemogenic stromal factor (LSF) that was neutralized by a polyclonal antiserum to murine macrophage colony-stimulating factor...
... the biological activity of this molecule in a manner comparable to its effect on recombinant human or murine M-CSF. FDC-P1JL26 parent cells were positive for Ly5, MEL-14, mGR...

... a 100-fold lower frequency if kept in suspension in LSF in the absence of stromal cells. Antiserum to M-CSF or monoclonal antibody to the murine M-CSF receptor (c...

... not inhibit or displace cobblestone island formation by either clone of FDC-P1 on irradiated stromal cells indicating a mechanism of binding not involving the M-CSF receptor. However, anti-serum...

... independent subclone. In separate studies, a subclone of IL-3-dependent 32Dc13 cells, expressing the transfected murine c-fms protooncogene but not the parent 32Dc13 cell line or another subclone expressing the transfected gene for the human M-CSF receptor, showed adherence and became factor independent when cocultivated with irradiated D2XRII stromal

cells. Thus, irradiated stromal cells bind M-CSF receptor-positive hematopoietic progenitor cells and induce c-fms-dependent factor-independent tumorigenic subclones. The cellular interactions in this ...

14/3,K/22 (Item 22 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10104560 PMID: 1547339
Stromal support enhances cell-free retroviral vector transduction of human bone marrow long-term culture-initiating cells.
Moore K A; Deisseroth A B; Reading C L; Williams D E; Belmont J W
Institute for Molecular Genetics, Baylor College of Medicine, Houston, TX 77030.
Blood (UNITED STATES) Mar 15 1992, 79 (6) p1393-9, ISSN 0006-4971--Print Journal Code: 7603509
Contract/Grant No.: 5 RO1 A130243-02/05; United States PHS; F32 RR05034; RR; United States NCRR; P01-CA-49639; CA; United States NCI
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, P.H.S.
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Stromal support enhances cell-free retroviral vector transduction of human bone marrow long-term culture-initiating cells.
...we reasoned that cell-free transduction of bone marrow cells (BMC) may be aided by stromal support. We used two high-titer replication-defective retroviral vectors to differentially mark progenitor cells. The transducing vector was shown to be a specific DNA fragment by polymerase chain reaction of colony...

... BMC were infected separately by cell-free virions with or without pre-established, irradiated, allogeneic stromal layers, and in the presence or absence of exogenous growth factors (GF). The GF assessed...

... a predominate provirus after maintenance in the same microenvironment. The results show gene transfer into human LTC-initiating cells by cell-free retroviral vector and a beneficial effect of stromal support allowing a transduction efficiency of 64.6% in contrast to 15.8% without a supporting stromal layer. A high transduction rate was achieved independent of stimulation with exogenous GF. We propose that autologous marrow stromal support during the transduction period may have application in clinical gene therapy protocols.

14/3,K/23 (Item 23 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09616194 PMID: 2291566
Gene transfer into murine hematopoietic stem cells and bone marrow stromal cells.
Luskey B D; Lim B; Apperley J F; Orkin S H; Williams D A
Howard Hughes Medical Institute, Boston, Massachusetts 02115.
Annals of the New York Academy of Sciences (UNITED STATES) 1990, 612 p398-406, ISSN 0077-8923--Print Journal Code: 7506858

Publishing Model Print
Document type: Journal Article; Review
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

...prestimulation with a simplified retrovirus, Zip PGK ADA, demonstrated long-term and stable expression of human adenosine deaminase (ADA) after full hematopoietic reconstitution. In separate experiments, retroviral vectors have been used...

...and selection of hematopoietic stem cells without loss of reconstituting ability. We are using immortalized stromal cell lines resistant to deoxycoformycin (dCF) to select transduced murine HSC containing human ADA in vitro. The use of recombinant retroviral vectors provides a promising approach to correction of human diseases involving bone marrow cells.

14/3,K/24 (Item 24 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09301335 PMID: 2406159
Effect of different promoters on expression of genes introduced into hematopoietic and marrow stromal cells by electroporation.
Keating A; Horsfall W; Hawley R G; Toneguzzo F
Oncology Research, Toronto General Hospital, Ontario, Canada.
Experimental hematology (UNITED STATES) Feb 1990, 18 (2) p99-102, ISSN 0301-472X--Print Journal Code: 0402313
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... introducing genes into hematopoietic cells. However, achieving and maintaining high levels of gene expression in transfected hematopoietic progenitor cells remains problematic. In order to address this problem we examined the effect...

... and cellular promoters on the transient expression of reporter genes transferred into K562, KG1a, and human marrow stromal cells. We found that although the Rous sarcoma virus long terminal repeat was most active ...

... more active than the other promoters in KG1a cells as well as in the marrow stromal cell population. Long-term stable gene expression was also demonstrated in stromal cells. We infer that the murine cytomegalovirus immediate early promoter may be highly active in human hematopoietic progenitor cells and that human marrow stromal cells may be an attractive vehicle for gene delivery.

14/3,K/25 (Item 1 from file: 159)
DIALOG(R)File 159:Cancerlit

02062291 PMID: 94699285
Growth factor expression and transmembrane signaling in marrow stromal

cells are altered by MHC-class II cross-linking (Meeting abstract).
Huss; Storb; Deeg
Fred Hutchinson Cancer Res. Center, Seattle, WA
Non-serial 1993, Molecular Biology of Hematopoiesis, 8th Symposium. July 9-13, 1993, Basel, Switzerland, p. 9, 1993.,
Document Type: JOURNAL ARTICLE
Languages: ENGLISH
Main Citation Owner: NOTNLM
Record type: Completed

Marrow stromal cells support hematopoiesis by providing matrix and growth factors, functions also central to the success...

... monoclonal antibody (MAB; H81.9 or B1F6) immediately post-transplant experience graft failure. In canine Dexter cultures, MAB H81.9 or B1F6 induce a loss of adherent layer and rapid exhaustion of CFU-GM. Although the expression of class II molecules on hematopoietic stem cells is controversial, some stromal cells express class II antigens. We speculated that anti-class II MAB may affect growth factor expression. Marrow-derived stromal cell lines were used in vitro to determine the effects of irradiation and MAB on...

...and hybridized with canine cDNA probes where the canine DNA sequence was known or with human cross-reactive cDNA probes. GM-CSF mRNA was upregulated within 48 hours after treatment, whereas...

... MAB-induced transmembrane signaling was responsible for growth factor up- or downregulation. Current experiments with stromal cells transduced with individual canine class II genes (DR alpha, DR beta) investigate more specifically the effects...

14/3,K/26 (Item 2 from file: 159)
DIALOG(R)File 159:Cancerlit

02061317 PMID: 94698048
Interleukin-6: its antitumor effects and potential clinical utility.
Sun
Univ. of Wisconsin - Madison
Diss Abstr Int [B] 1993, 54 (4), ISSN 0419-4217
Document Type: THESIS
Languages: ENGLISH
Main Citation Owner: NOTNLM
Record type: Completed

... mediator in the acute phase inflammatory response. In addition, IL-6 expands the population of hematopoietic stem cells and increases platelet number. Recently, IL-6 has been suggested to have potential therapeutic...

... also to examine its toxicity in nonhuman primates. We found that the IL-6 gene- transfected B16 melanoma cells (B16-IL-6) grew slower in mice. The administration of recombinant human IL-6 can also reduce B16 growth to a similar extent. Histology reveals the infiltration...

... nonimmune mechanisms might contribute to the IL-6 mediated antitumor effect as we demonstrated increased stromal reaction and less neovascularization associated with the B16-IL-6 tumors. Furthermore, we transfected more immunogenic SP1 fibrosarcoma cells with the same IL-6

gene (SP1-IL-6) and...

... nonspecific mechanisms may indicate a clinical advantage for this cytokine in the context of treating human cancers. In light of the promising therapeutic applications of IL-6, we treated ten female...

14/3,K/27 (Item 3 from file: 159)
DIALOG(R)File 159:Cancerlit

01986573 PMID: 94605812
Concise reviews in clinical and experimental hematology.
No affiliation given
Non-serial 1992, Concise Reviews in Clinical and Experimental Hematology. Murphy MJ, Jr, ed. Dayton, OH, AlphaMed Press, 385 p., 1992.,
Document Type: MONOGRAPH
Languages: ENGLISH
Main Citation Owner: NOTNLM
Record type: Completed

... clinical and experimental hematology. The presentations are divided into four groups. (1) Clinical considerations: recombinant human erythropoietin (Epo) for the treatment of the anemia of cancer, the role of cytokines in...

... acute leukemias, in vitro and in vivo experiences with interleukin (IL)-3, ras mutations in human leukemia and related disorders, promise and controversy of cytokines in treatment of myelodysplastic syndrome, hexamethylene bisacetamide and related agents as inducers of differentiation of transformed cells (mechanism of action and potential for cancer therapy), and all-trans-retinoic acid treatment...
... considerations: Epo biology, biomolecule-cell interactions and the regulation of myelopoiesis, cell surface antigens on human marrow cells (dissection of hematopoietic development using monoclonal antibodies and multiparameter flow cytometry), regulation of...

... marrow architecture: architecture of bone marrow cell populations, vascular endothelial cells and hematopoietic regulation, and stromal cells of hemopoietic origin. (4) Models of cell differentiation and proliferation: reliability of in vitro...

... origins and properties of hematopoietic growth factor-dependent cell lines, differentiation of murine erythroleukemia and human HL-60 leukemia cells lines, gene transfer into hemopoietic stem cells using retroviral vectors, targeted...

... heme pathway enzyme genes in mammalian cells, gene expression during erythropoiesis, and heme regulation of hematopoietic stem cell growth and development.

14/3,K/28 (Item 4 from file: 159)
DIALOG(R)File 159:Cancerlit

01985275 PMID: 92686118
ENGINEERING HUMAN BONE MARROW STROMAL CELLS.
Weber
Case Western Reserve Univ., Health Sciences

Diss Abstr Int [B] 1992, 52 (10), ISSN 0419-4217
Document Type: THESIS
Languages: ENGLISH
Main Citation Owner: NOTNLM
Record type: Completed

ENGINEERING HUMAN BONE MARROW STROMAL CELLS.

Bone marrow stromal cells regulate normal and leukemic hematopoietic cells through both soluble and cell surface-associated molecules. To molecularly probe the complexities of stromal cell hemoregulation, stable gene transfer capabilities were developed for a model human bone marrow stromal cell line, KM-102, using Epstein-Barr virus and BK virus episomal expression vectors. Antisense...

... function of individual soluble factors among the variety of hematopoietic cytokines produced by KM-102 stromal cells. Granulocyte/macrophage colony-stimulating factor (GM-CSF) served as a model soluble cytokine. Supernatants from KM-102 cells stably transfected with an antisense GM-CSF episomal expression vector no longer possessed detectable levels of GM-CSF or colony-stimulating activity (CSA). Significantly, GM-CSF inhibition unmasked a hematopoietic progenitor cell inhibitory activity. These data suggest that GM-CSF functions in a dominant mode as...

... 102 and point to a hierarchical relationship among stimulatory and inhibitory hematopoietic factors produced by stromal cells. KM-102 stromal cell hemoregulatory effects mediated through cell contact-dependent interactions were studied in coculture experiments with human myeloid leukemia cell lines. In response to the chemical inducer, 1 alpha, 25-dihydroxyvitamin D3...

... their loosely adherent and nonadherent counterparts differentiated normally. These data suggest that in clinical settings, stromal cells may render leukemic cells refractory to differentiation induction therapy. Intercellular adhesion molecule-1 (ICAM-1) served as a model cell surface molecule in our KM-102 stromal cell transfection analyses. This surface molecule is known to play a dominant role in certain...

... expression experiments did not support a dominant role for ICAM-1 in mediating KM-102 stromal cell:hematopoietic cell interactions. Lastly, the stromal cell surface was engineered using a chimeric gene expression strategy to artificially direct hematopoietic cellular...

... strategy, and derivative protein transfer strategies, can now be used for elucidating the mechanisms of stromal cell hemoregulatory phenomena mediated through cell-cell contact, as well as for engineering the cell surface phenotypes of stromal cells to be used in cell-based therapies. (Full text available from University Microfilms International...

14/3,K/29 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13550301 BIOSIS NO.: 199699184361
Sustained retroviral gene marking and expression in lymphoid and myeloid cells derived from transduced hematopoietic cells
AUTHOR: Plavec I (Reprint); Voytovich A; Moss K; Webster D; Hanley M B; Escaich S; Ho K E; Boehnlein E; Digiusto D L
AUTHOR ADDRESS: SyStemix, 3155 Porter Dr., Palo Alto, CA 94304, USA**USA

JOURNAL: Gene Therapy 3 (8): p717-724 1996 1996
ISSN: 0969-7128
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The expression of antiviral genes in human hematopoietic stem or progenitor cells has been proposed as a strategy for gene therapy of ...

...for a transdominant inhibitor of HIV replication (RevM10) into CD34+ stem/progenitor cells isolated from human umbilical cord blood (UCB). Following transduction, cells were allowed to differentiate either in vitro in clonogenic assays and long-term stromal cell cultures or in human thymus implanted in immunodeficient scid/scid mice in vivo (SCID-hu). Following differentiation and expansion...

...10-30% in most cases) were detected in methylcellulose colony assays and in long-term stromal cell cultures (1-5%). In contrast, gene-marked T cells derived from transduced CD34+ cells in a SCID-hu model were detected at an even lower frequency (0...

...findings demonstrate that LTR-driven gene expression is sustained in relevant cells derived from retrovirus- transduced hematopoietic progenitor cells after extensive differentiation in vitro and in vivo and suggest that stringent in vivo...
DESCRIPTORS:
...ORGANISMS: human immunodeficiency virus type 1 (Retroviridae
MISCELLANEOUS TERMS: ... HUMAN CD34+ STEM/HEMATOPOIETIC PROGENITOR CELLS

14/3,K/30 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13048306 BIOSIS NO.: 199598516139
The presence of an autologous marrow stromal cell layer increases glucocerebrosidase gene transduction of long-term culture initiating culture initiating cells (LTCICs) from the bone marrow of a patient with Gaucher disease
AUTHOR: Wells S; Malik P; Pensiero M; Kohn D B; Nolta J A (Reprint)
AUTHOR ADDRESS: Childrens Hospital Los Angeles, Division of Research Immunology/Bone Marrow Transplantation, 4650 Sunset Boulevard, Mailstop 62, Los Angeles, CA 90027, USA**USA
JOURNAL: Gene Therapy 2 (8): p512-520 1995 1995
ISSN: 0969-7128
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

...ABSTRACT: the marrow of a Gaucher patient using G1GC, a simple retroviral vector containing a normal human GC cDNA. The ability of autologous stromal support and recombinant cytokines to increase the extent of transduction of colonyforming cells (CFCs) and longterm culture initiating cells (LTCICs) was assessed. The presence of a stromal layer significantly increased the extent of GC gene transfer into 14-day CFCs, as determined...

...PCR) of individual colonies (18.8% with stroma versus 5% without, P lt

0.001). Stromal support also increased the extent of transduction of LTCICs (10% with stroma versus 0.83...

...0.001). Non-adherent cells from long-term bone marrow cultures initiated with CD34+ progenitors transduced on autologous stroma had higher levels of GC enzyme activity than cultures initiated with cells transduced without stroma. The percentage of cells which were GC positive by immunohistochemistry was also increased...

...into CFCs but not LTCICs. These studies indicate that the GC gene can be effectively transduced into LTCICs by retroviral vectors in the presence of stroma at levels significant for clinical...
DESCRIPTORS:
...MAJOR CONCEPTS: Human Medicine, Medical Sciences
ORGANISMS: human (Hominidae)

14/3,K/31 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

0077428264 EMBASE No: 1998338684
HIV, but not murine leukemia virus, vectors mediate high efficiency gene transfer into freshly isolated G SUB 0/G SUB 1 human hematopoietic stem cells
Uchida N.; Friera A.M.; He D.; Reitsma M.J.; Chang W.C.; Veres G.; Scollay R. // Sutton R.E. // Weissman I.L. // Uchida N.
SyStemix, Inc., A Norvartis Company, Palo Alto, CA 94304, United States // Department of Biochemistry, Howard Hughes Medical Institute, Stanford University Medical Center, Stanford, CA 94305, United States // Depts. of Pathol. and Devmtl. Biol., Stanford University, School of Medicine, Stanford, CA 94305, United States // StemCells, Inc., 525 Del Rey Avenue, Sunnyvale, CA 94086, United States
AUTHOR EMAIL: nuchida@stemcell.net; nuchida@stemcell.net
CORRESP. AUTHOR: Uchida N.
CORRESP. AUTHOR AFFIL: StemCells, Inc., 525 Del Rey Avenue, Sunnyvale, CA 94086, United States
CORRESP. AUTHOR EMAIL: nuchida@stemcell.net

Proceedings of the National Academy of Sciences of the United States of America (Proc. Natl. Acad. Sci. U. S. A.) (United States) September 29, 1998, 95/20 (11939-11944)
CODEN: PNASA ISSN: 00278424
DOI: 10.1073/pnas.95.20.11939
DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract
LANGUAGE: English SUMMARY LANGUAGE: English
NUMBER OF REFERENCES: 51

...vectors mediate high efficiency gene transfer into freshly isolated G SUB 0/G SUB 1 human hematopoietic stem cells

...have opened the possibility that quiescent, G SUB 0/G SUB 1 hematopoietic stem cells (HSC) can be gene transduced ; lentiviruses (such as HIV type 1, HIV) encode proteins that permit transport of the viral...

...demonstrated efficient transduction by using an HIV-1-based vector gene delivery system into various human cell types including human CD34 SUP + cells or terminally differentiated neurons. Here we compare the transduction efficiency of two vectors, HIV-based and murine leukemia virus

(MuLV)-based vectors, on untreated and highly purified human HSC subsets that are virtually all in G SUB 0/G SUB 1. The HIV vector, but not MuLV vector supernatants, transduced freshly isolated G SUB 0/G SUB 1 HSC from mobilized peripheral blood. Single-step transduction using replication-defective HIV resulted in HSC that expressed the green fluorescent protein (GFP) transgene while retaining their stem cell phenotype; clonal outgrowths of these GFP SUP + HSC on bone marrow stromal cells fully retained GFP expression for at least 5 weeks. MuLV-based vectors did not transduce resting HSC , as measured by transgene expression, but did so readily when the HSC were actively cycling after culture in vitro for 3 days in a cytokine cocktail. These results suggest that resting HSC may be transduced by lentiviral-based, but not MuLV, vectors and maintain their primitive phenotype, pluripotentiality, and at...
MEDICAL DESCRIPTORS:
article; cell isolation; gene expression regulation; gene transfer; human ; human cell ; Human immunodeficiency virus; Murine leukemia virus; phenotype; priority journal; signal transduction
SECTION HEADINGS:
Human Genetics
Microbiology: Bacteriology, Mycology, Parasitology and Virology

14/3,K/32 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE

0077094026 EMBASE No: 1998002450
Intracellular immunization of rhesus CD34 SUP + hematopoietic progenitor cells with a hairpin ribozyme protects T cells and macrophages from simian immunodeficiency virus infection
Johnson R.P. // Rosenzweig M.; Marks D.F.; Hempel D.; Heusch M.; Kraus G. ; Wong-Staal F.
New England Reg. Primate Res. Center, Harvard Medical School, One Pine Hill Dr, Southborough, MA 01772, United States // Affiliation unspecified.
CORRESP. AUTHOR: Johnson R.P.
CORRESP. AUTHOR AFFIL: New England Reg. Primate Res. Center, Harvard Medical School, One Pine Hill Dr, Southborough, MA 01772, United States

Blood (Blood) (United States) December 15, 1997, 90/12 (4822-4831)
CODEN: BLOOA ISSN: 00064971
DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract
LANGUAGE: English SUMMARY LANGUAGE: English
NUMBER OF REFERENCES: 69

...in vitro T-cell differentiation of genetically modified hematopoietic progenitor cells. Using a novel thymic stromal culture technique, we evaluated the ability of a hairpin ribozyme specific for simian immunodeficiency virus (SIV) and human immunodeficiency virus type 2 (HIV-2) to inhibit viral replication in T lymphocytes derived from transduced CD34 SUP + progenitor cells. Retroviral transduction of rhesus macaque CD34 SUP + progenitor cells with a...

...ranging between 21% and 56%. After transduction, CD34 SUP + cells were cultured on rhesus thymic stromal culture (to support in vitro differentiation of T cells) or in the presence of cytokines...

...macrophage-like cells). After expansion and selection with the neomycin analog G418, cells derived from transduced progenitor cells were

challenged with SIV. CD4 SUP + T cells derived from CD34 SUP + hematopoietic cells transduced with the ribozyme vector p9456t were highly resistant to challenge with SIV, exhibiting up to...

...in SIV replication, even after high multiplicities of infection. Macrophages derived from CD34 SUP + cells transduced with the 9456 ribozyme exhibited a comparable level of inhibition of SIV replication. These results show that a hairpin ribozyme introduced into CD34 SUP + hematopoietic progenitor calls can retain the ability to inhibit AIDS virus replication after T-cell differentiation and support the feasibility of intracellular immunization of hematopoietic stem cells against infection with HIV and SIV. Protection of multiple hematopoietic lineages with the SIV...

14/3,K/33 (Item 3 from file: 73)
DIALOG(R)File 73:EMBASE

0076712475 EMBASE No: 1997005419
A novel herpes vector for the high-efficiency transduction of normal and malignant human hematopoietic cells
Brenner M. // Dilloo D.; Rill D.; Entwistle C.; Boursnell M.; Zhong W.; Holden W.; Holladay M.; Inglis S.
Div. of Bone Marrow Transplantation, St. Jude Children's Res. Hospital, 332 N Lauderdale, Memphis, TN 38105, United States // Affiliation unspecified.
CORRESP. AUTHOR: Brenner M.
CORRESP. AUTHOR AFFIL: Bone Marrow Transplantation Division, St Jude Children's Research Hospital, 332 N Lauderdale, Memphis, TN 38105, United States

Blood (BLOOD) (United States) January 1, 1997, 89/1 (119-127)
CODEN: BLOOA ISSN: 00064971
DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract
LANGUAGE: English SUMMARY LANGUAGE: English
NUMBER OF REFERENCES: 45

A novel herpes vector for the high-efficiency transduction of normal and malignant human hematopoietic cells

...advantages as vectors for gene transfer, but as yet they have not proved capable of transducing hematopoietic cells. Using a genetically inactivated form of HSV that is restricted to a single cycle of replication (disabled single-cycle virus, [DISC-HSVI], we have transduced normal human hematopoietic progenitor cells and primary leukemia blasts with efficiencies ranging from 80% to 100%, in the absence of growth factors or stromal support. Toxicity was low, with 70% to 100% of cells surviving the transduction process. Peak...

...is the transfer of immunostimulatory genes, to generate leukemia immunogens. Thus, murine A20 leukemia cells transduced with a DISC- HSV vector encoding granulocyte-macrophage colony-stimulating factor were able to stimulate a potent antitumor response in mice, even against pre-existing leukemia. The exceptional transducing ability of the DISC-HSV vector should therefore facilitate genetic manipulation of normal and malignant human hematopoietic cells for biological and clinical investigation.
MEDICAL DESCRIPTORS:
article; cloning vector; controlled study; herpes simplex virus; human ;

human cell ; immunostimulation; priority journal
SECTION HEADINGS:
Human Genetics
Hematology
Clinical and Experimental Biochemistry

14/3,K/34 (Item 4 from file: 73)
DIALOG(R)File 73:EMBASE

0076649982 EMBASE No: 1996326346
Dual action of retinoic acid on human embryonic/fetal hematopoiesis: Blockade of primitive progenitor proliferation and shift from multipotent/erythroid/monocytic to granulocytic differentiation program
Peschle C. // Tocci A.; Parolini I.; Gabbianelli M.; Testa U.; Luchetti L.; Samoggia P.; Masella B.; Russo G.; Valtieri M.
T. Jefferson University, T. Jefferson Cancer Institute, BLSB, 233 S 10th St, Philadelphia, PA 19107-5541, United States // Affiliation unspecified.
CORRESP. AUTHOR: Peschle C.
CORRESP. AUTHOR AFFIL: T. Jefferson Cancer Institute, BLSB, T. Jefferson University, 233 S 10th St, Philadelphia, PA 19107-5541, United States

Blood (BLOOD) (United States) October 15, 1996, 88/8 (2878-2888)
CODEN: BLOOA ISSN: 00064971
DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract
LANGUAGE: English SUMMARY LANGUAGE: English
NUMBER OF REFERENCES: 41

Dual action of retinoic acid on human embryonic/fetal hematopoiesis: Blockade of primitive progenitor proliferation and shift from multipotent/erythroid/monocytic to...

...proliferative potential colony-forming cells [HPP-CFCs]) and putative hematopoietic stem cells (HSCs; assayed in Dexter -type long-term culture). High concentrations of either compound (1) drastically reduced the number of primary HPP-CFC colonies and totally abolished their recloning capacity and (2) inhibited HSC proliferation. It is crucial that these results mirror recent observations indicating that murine adult HPCs transduced with dominant negative ATRA receptor (RAR) gene are immortalized and show a selective blockade of...

...a dual effect hypothetically mediated by interaction with the RAR/RXR heterodimer, ie, inhibition of HSC /primitive HPC proliferation and induction of CFU-GEMM/BFU- E/CFU-M shift from the...
MEDICAL DESCRIPTORS:
...colony forming unit gemm; colony forming unit m; fetus; fetus liver; granulopoiesis; hematopoietic stem cell; human ; human cell ; priority journal

14/3,K/35 (Item 5 from file: 73)
DIALOG(R)File 73:EMBASE

0076623321 EMBASE No: 1996299620
Stromal cells maintain the radioprotective capacity of CFU-S during retroviral infection
Gortcalves F.; Dubart A.; Lacout C.; Vainchenker W.; Dumenil D.

U362 INSERM, Institut Gustave Roussy, rue Camille Desmoulins, 94800, Villejuif, France
CORRESP. AUTHOR: Dumenil D.
CORRESP. AUTHOR AFFIL: U362 INSERM, Institut Gustave Roussy, rue Camille Desmoulins, 94800 Villejuif, France

Gene Therapy (GENE THER.) (United Kingdom) October 14, 1996, 3/9 (761-768)
CODEN: GETHE ISSN: 09697128
DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract
LANGUAGE: English SUMMARY LANGUAGE: English
NUMBER OF REFERENCES: 31

...adherent and nonadherent fraction; (2) the replacement of the packaging cell line by a 'competent' stromal cell line; and (3) the effects of G418 selection. All CFU-S having radioprotective capacity were found in the adherent fraction when the packaging cell line or the stromal cell line (MS-5) chosen for its capacity to maintain long-term bone marrow culture were used during the co-culture. The neo resistance gene was transduced into CFU-S with the same efficiency using co-culture with the packaging cell line...

...of CFU-S (70% versus 30%) had radioprotective properties, suggesting an important role for the stromal cells in the maintenance of hematopoietic reconstituting ability. Finally, G418 selection, even for a limited...
SECTION HEADINGS:
Radiology
Human Genetics
Drug Literature Index
Microbiology: Bacteriology, Mycology, Parasitology and Virology

14/3,K/36 (Item 6 from file: 73)
DIALOG(R)File 73:EMBASE

0076140332 EMBASE No: 1995189890
Growth factors and stromal support generate very efficient retroviral transduction of peripheral blood CD34 SUP + cells from Gaucher patients
Karlsson S. // Xu L.-C.; Kluepfel-Stahl S.; Blanco M.; Schiffmann R.; Dunbar C.
Molec. and Medical Genetics Section, Devmtl. and Metab. Neurology Branch, NIH, 9000 Rockville Pike, Bethesda, MD 20892, United States // Affiliation unspecified.
CORRESP. AUTHOR: Karlsson S.
CORRESP. AUTHOR AFFIL: Molecular/Medical Genetics Section, NINDS, NIH, 9000 Rockville Pike, Bethesda, MD 20892, United States

Blood (BLOOD) (United States) July 1, 1995, 86/1 (141-146)
CODEN: BLOOA ISSN: 00064971
DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract
LANGUAGE: English SUMMARY LANGUAGE: English
NUMBER OF REFERENCES: 38

...PB CD34 SUP + cells using this transduction protocol may allow repeated delivery of 'GC-corrected' hematopoietic stem and progenitor cells to Gaucher's-disease patients.
MEDICAL DESCRIPTORS:
article; blood cell; bone marrow cell; cell survival; controlled study; gene transfer; genetic transduction; human ; human cell ; priority

journal; retrovirus; stroma cell

14/3,K/37 (Item 7 from file: 73)
DIALOG(R)File 73:EMBASE

0075853097 EMBASE No: 1994270279
Efficient transfer of selectable and membrane reporter genes in hematopoietic progenitor and stem cells purified from human peripheral blood
Peschle C. // Valtieri M.; Schiro R.; Chelucci C.; Masella B.; Testa U.; Casella I.; Montesoro E.; Mariani G.; Hassan H.J.
Thomas Jefferson Cancer Institute, Thomas Jefferson University, Bluemle Life Sciences Building, 233 S. 10th St., Philadelphia, PA 19107, United States // Affiliation unspecified.
CORRESP. AUTHOR: Peschle C.
CORRESP. AUTHOR AFFIL: Thomas Jefferson Cancer Institute, Thomas Jefferson University, Bluemle Life Sciences Building, 233 S. 10th St., Philadelphia, PA 19107, United States

Cancer Research (CANCER RES.) (United States) August 15, 1994, 54/16 (4398-4404)
CODEN: CNREA ISSN: 00085472
DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract
LANGUAGE: English SUMMARY LANGUAGE: English
NUMBER OF REFERENCES: 47
...transfer of selectable and membrane reporter genes in hematopoietic progenitor and stem cells purified from human peripheral blood

...receptor complementary DNA; and (b) effective gene transduction of putative HSCs, i.e., cells initiating Dexter -type long-term culture (LTC-ICs). Purified HPCs induced into cycling by growth factors (interleukin 3, interleukin 6, c-kit ligand) were transduced with the N2 retroviral vector containing the neomycin resistance (neo(r)) gene. More than 80% of transduced HPCs were resistant to the toxic G418 level. Thereafter, the HPCs were effectively transduced with the LNSN retroviral vector containing a nerve growth factor receptor complementary DNA; the nerve growth factor receptor was detected on >=18% of the transduced HPCs. These experiments provide a new tool from which (a) to monitor expression of a transduced membrane reporter on hematopoietic cells, particularly at the level of HPCs/HSCs, and (b) to characterize the transduced cells by double- and triple-labeling membrane antigen analysis. Purified HPCs/HSCs grown in Dexter -type LTC were transduced at 1 week by exposure to supernatant N2 retroviral particles in the absence of exogenous...

...These experiments represent a first step toward development of preclinical models for gene transfer into human peripheral blood HSCs by complex retroviral vectors.
MEDICAL DESCRIPTORS:
article; cell culture; controlled study; female; gene therapy; human ; human cell ; human experiment; male; molecular cloning; normal human ; peripheral circulation; priority journal; reporter gene; stem cell

14/3,K/38 (Item 8 from file: 73)
DIALOG(R)File 73:EMBASE

0075724347 EMBASE No: 1994150969

Sustained human hematopoiesis in immunodeficient mice by cotransplantation of marrow stroma expressing human interleukin-3: Analysis of gene transduction of long-lived progenitors

Kohn D.B. // Nolta J.A.; Hanley M.B.
Research Immunology/BMT, Childrens Hospital Los Angeles, Mailstop 62, 4650 Sunset Blvd, Los Angeles, CA 90027, United States // Affiliation unspecified.
CORRESP. AUTHOR: Kohn D.B.
CORRESP. AUTHOR AFFIL: Research Immunology/BMT, Childrens Hospital Los Angeles, Mailstop 62, 4650 Sunset Blvd, Los Angeles, CA 90027, United States

Blood (BLOOD) (United States) May 15, 1994, 83/10 (3041-3051)
CODEN: BLOOA ISSN: 00064971
DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract
LANGUAGE: English SUMMARY LANGUAGE: English
NUMBER OF REFERENCES: 24

Sustained human hematopoiesis in immunodeficient mice by cotransplantation of marrow stroma expressing human interleukin-3: Analysis of gene transduction of long-lived progenitors

We have developed a novel cotransplantation system in which gene-transduced human CD34 SUP + progenitor cells are transplanted into immunodeficient (bnx) mice together with primary human bone marrow (BM) stromal cells engineered to produce human interleukin-3 (IL-3). The IL-3-secreting stroma produced sustained circulating levels of human IL-3 for at least 4 months in the mice. The IL-3-secreting stroma, but not control stroma, supported human hematopoiesis from the cotransplanted human BM CD34 SUP + progenitors for up to 9 months, such that an average of 6% of the hematopoietic cells removed from the mice were of human origin (human CD45 SUP +). Human multilineage progenitors were readily detected as colony- forming units from the mouse marrow over this time period. Retroviral- mediated transfer of the neomycin phosphotransferase gene or a human glucocerebrosidase cDNA into the human CD34 SUP + progenitor cells was performed in vitro before cotransplantation. Human multilineage progenitors were recovered from the marrow of the mice 4 to 9 months later and were shown to contain the transduced genes. Mature human blood cells marked by vector DNA circulated in the murine peripheral blood throughout this time period. This xenograft system will be useful in the study of gene transduction of human hematopoietic stem cells, by tracing the development of individually marked BM stem cells into mature blood cells...
MEDICAL DESCRIPTORS:
...cell survival; cell transplantation; colony forming unit; controlled study; female; genetic transduction; hematopoietic stem cell; human ; human cell ; immunostimulation; male; mouse; nonhuman; normal human ; priority journal; stem cell
?

Set	Items	Description
S1	834	(HSC OR (HEMATOPOIETIC (W) (STEM OR PROGENITOR))) (S) ((MESENCHYMAL (W) STEM) OR MSC)
S2	57	S1 (S) (TRANSDUCED OR TRANSFORMED OR TRANSFECTED)
S3	0	S2 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S4	0	S2 NOT PY>1998
S5	1	S1 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S6	3875	(HSC OR (HEMATOPOIETIC (W) (PROGENITOR OR STEM))) (S) (DEXTER OR STROMAL)

```
S7          0   S6 (S) (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S8          0   S6 AND (CO-CULTURE OR CO-CULTURED OR CO-CULTURING)
S9        333   S6 (S) (TRANSDUCED OR TRANSDUCING OR TRANSFORMED OR TRANSF-
              ECTED OR TRANSFECTING)
S10       145   S9 NOT PY>1998
S11        53   RD  (unique items)
S12         1   S11 AND (FEEDER)
S13         0   S11 AND (MSC OR (MESENCHYMAL (W) STEM) OR (BONE (W) MARROW
              (W) STEM))
S14        38   S11 AND (HUMAN)
?

COST
       20feb08 13:08:44 User259876 Session D1075.2
            $4.81    1.365 DialUnits File155
               $6.00  25 Type(s) in Format  3
            $6.00  25 Types
    $10.81  Estimated cost File155
            $1.31    0.403 DialUnits File159
               $1.12  4 Type(s) in Format  3
            $1.12  4 Types
     $2.43  Estimated cost File159
            $8.64    1.396 DialUnits File5
               $7.32  3 Type(s) in Format  3
            $7.32  3 Types
    $15.96  Estimated cost File5
           $18.90    1.471 DialUnits File73
              $28.40  8 Type(s) in Format  3
           $28.40  8 Types
    $47.30  Estimated cost File73
            OneSearch, 4 files,  4.635 DialUnits FileOS
     $2.66  INTERNET
    $79.16  Estimated cost this search
    $79.68  Estimated total session cost   4.771 DialUnits
?
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